

**SECTION 12.02**  
**OVERHEAD SIGN SUPPORT FOUNDATION**

**12.02.01--Description:** Work under this item shall consist of the construction of foundations for overhead sign supports including the removal and satisfactory disposal of all materials required for excavation for the foundations, and backfilling with suitable material, in conformity with the requirements of the plans or as ordered, and in conformance with these specifications.

**12.02.02--Materials:** Class "A" Concrete shall conform to the requirements of Sections 6.01 and M.03.

Non-shrink, non-staining grout shall conform to the requirements of M.03.01-12.

Reinforcing steel shall conform to the requirements of Section 6.02 and Article M.06.01.

Rigid metal conduits, ground rod sleeves and related hardware shall be as shown on plans.

Anchor bolts shall conform to the requirements of ASTM A 449.

Leveling nuts and nuts for anchor bolt assemblies shall conform to the requirements of Article M.18.02.

Pedestal Grout Leveling Templates shall conform to the requirements of Article M.18.02.

**12.02.03--Construction Methods:** Prior to start of construction of the foundations the Contractor shall, in the field, verify the location of the foundations and establish and verify all elevations and dimensions.

Excavation for the footings shall conform to the neat lines of the base as shown on the plans. All steel reinforcement shall be accurately placed in the position shown on the plans and firmly held during placing and setting of concrete.

The footing of the concrete foundation shall be placed without forms except where unusual soil conditions prevent excavation to neat lines as shown on the plans. Where unusual soil conditions make the use of forms necessary, in the opinion of the Engineer, the cost thereof shall be considered included in the cost of the foundations.

Where rock ledge or large boulders are exposed before excavation has attained the required depth, the Engineer may order rock anchors installed as directed by the Engineer.

Where rock anchors are required, they shall be paid for in conformance with Article 1.04.05.

After the concrete for the footing has sufficiently set, in the opinion of the Engineer, the portion of the concrete foundation, hereinafter designated as the stem, shall be formed to conform to the details shown on the plans. The forms shall include a template to hold the required anchor bolt assemblies, ground rod sleeve and conduit in their correct position.

Anchor bolt assemblies shall conform to the requirements shown on the plans and shall be embedded in the concrete which shall be placed to within the minimum distance of the finished surface of the stem as shown on the plans forming a construction joint for the non-shrink grout. Each bolt of the anchor bolt assembly shall be fitted with two leveling nuts.

Construction joints other than those shown on the plans will not be permitted.

The top and bottom surfaces of the grout leveling template shall be planed, or else the plate shall be hot straightened.

The grout leveling template shall be clamped in position by two leveling nuts at each anchor bolt. These leveling nuts shall be adjusted to assure a truly level finished foundation surface at the proper elevation.

The space between the grout leveling template and pedestal concrete shall be grouted with non-shrink, non-staining grout. The grout shall be forced by rodding or by other suitable means from one side of the template until it flows freely out at the opposite side. Care shall be taken to eliminate voids underneath the template.

Before grouting, the concrete areas that will be in contact with the grout shall be cleaned of all loose or foreign material that would in any way prevent bond between the grout and concrete surfaces. These concrete surfaces shall be kept thoroughly moistened until the surface is completely saturated prior to placing the grout. The grout shall be moisture cured for 7 days. No load shall be allowed on the grout that has been in place for less than 7 days unless otherwise approved by the Engineer.

The grout leveling template shall remain in place for a minimum of two days after placement of the grout.

All conduits shall be capped with insulated bushings before placing the grout. Where the signs are not to be illuminated, the caps shall be made fully watertight. The number of conduits in the foundation will be determined by the Engineer.

The concrete shall be finished in conformance with the pertinent requirements of Subarticle 6.01.03-21. Backfill shall be placed and thoroughly tamped to the elevation shown on the plans.

**12.02.04--Method of Measurement:** This work will be measured for payment by the number of foundation units, of the type specified, completely installed and accepted. Each overhead cantilever sign support shall have one (1) foundation unit and each overhead truss sign support shall have two (2) foundation units.

**12.02.05--Basis of Payment:** The work will be paid for at the Contract unit price each for "Overhead Sign Support Foundation," of the type specified, complete in place, which price shall include all materials, excavation, backfill, equipment, labor, tools and work incidental thereto including rigid metal conduits and ground rod sleeve with 16 mm X 3.7 m ground rod driven in position as directed by the Engineer.

Pay Item	Pay Unit
Overhead Truss Sign Support Foundation (Type)	EA.
Overhead Cantilever Sign Support Foundation (Type)	EA.